

external margin of the blade, so that a valley is formed between the inner and the outer part of the tooth.

By the conformation of its upper carnassial, therefore, the fossil is excluded from the *Melinae*—the upper and the lower one making only a slight approach towards the form they have in some members of this subfamily; whilst the characters of the skull and of the skeleton, so far as known, bring it likewise in closer connection with the *Musteline* and with *Mustela* in particular. To emphasize this, it seems preferable to leave it in the latter genus, viz., to revive the name by which it was originally described—*Mustela paleattica* Weith.

EXPLANATION OF PLATE VII.

Skull of *Mustela paleattica* Weith., from Pikermi; Geological Museum, Turin.

All figures of the natural size.

Fig. 1. Side view. Fig. 2. Upper view. Fig. 3. Lower view. Fig. 4. Posterior upper premolar and molars, right side. Fig. 5. Lower true molars and posterior premolar, right side.

2. On Two new Genera of Rodents from the Highlands of Bolivia. By OLDFIELD THOMAS, F.R.S.

[Received January 28, 1902.]

(Plates VIII. & IX.¹)

Mr. Perry O. Simons, the collector who has been doing such admirable work in the Andean chain, and to whose efforts we owe the discovery of a very large number of the mammals of that interesting region, has now sent home a collection from the high grounds of South-western Bolivia, from the Departments of Oruro, Potosi, and Sucre. Among these, besides some new species of known genera, described elsewhere, there are examples of two rodents so distinct as to demand generic separation, and I have therefore thought them worthy of being brought before the Society for description and illustration.

NEOCTODON, gen. nov. (*Octodontidae*.)

Tail comparatively bushy. Palms and soles granulated, the pads imperceptible.

Palatal foramina longer than in *Octodon*, the actual openings, instead of only the outer fossa, penetrating into the maxillæ.

Incisors smooth, comparatively thick antero-posteriorly, their depth rather more than $1\frac{1}{2}$ their breadth, as compared with about $1\frac{3}{8}$ in *Octodon*.

Molars rootless, simpler than in *Octodon*, with a slight concavity on their outer side and none on the inner, there being no trace

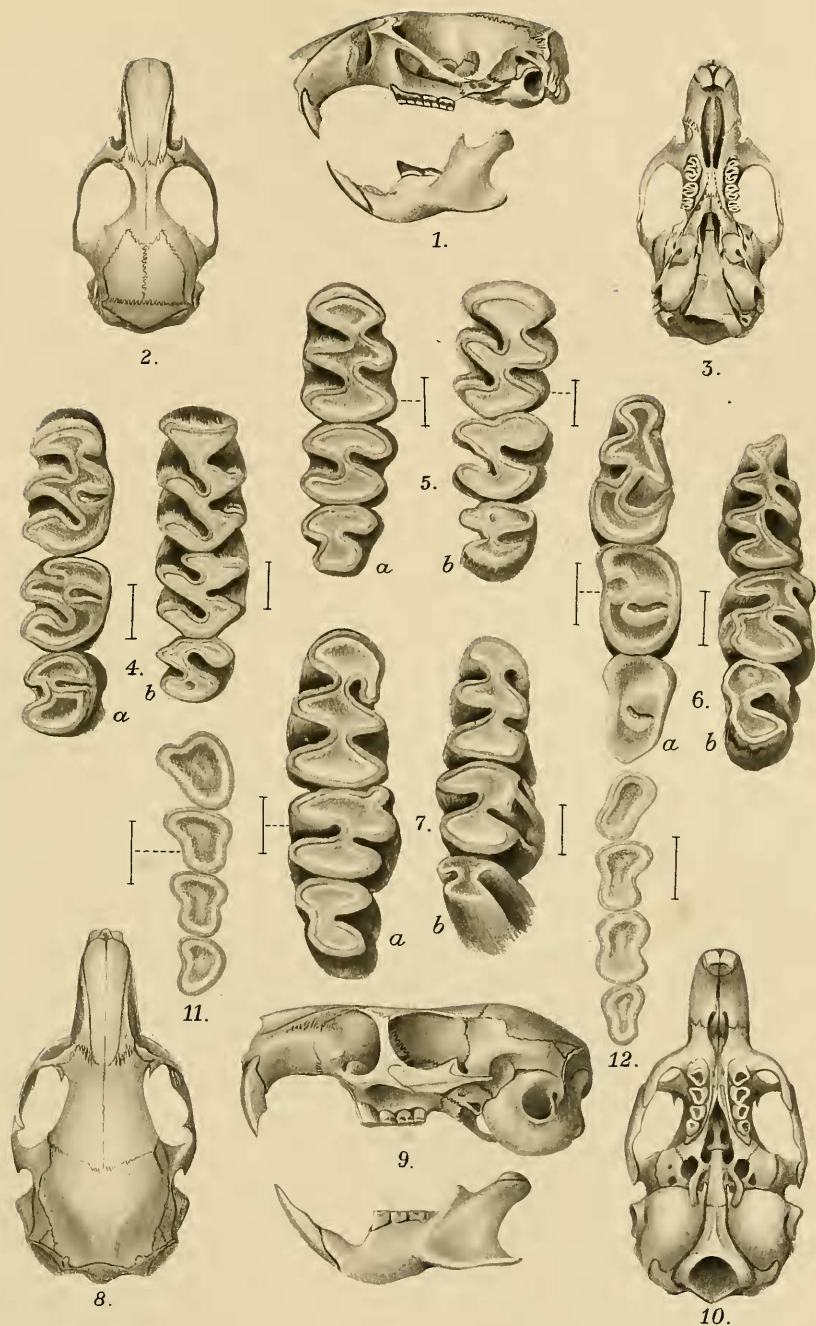
¹ For explanation of the Plates, see p. 117.



J. Smit del. et lith.

NEOTODON SIMONSI

Mintern Bros. imp.



H. Grönvold, del.

Photogravure by Bale & Danielsson L^{ts}

1, 2, 3, 4^a & 6^a ANDINOMYS EDAX, ADULT; 4^b & 6^b YOUNG OF DT
 5^a & 7^a CHINCHILLULA SAHAMÆ, ADULT; 5^b & 7^b YOUNG OF DT
 8-12, NEOCTODON SIMONSI; ADULT.

of the deep internal enamel infolding found in that genus. The premolar rounded, triangular in section. Lower teeth oval in section, a slight median constriction on each side of m_1 and m_2 .

This genus is, no doubt, closely allied to *Octodon*, of which it is a highland representative.

NEOCTODON SIMONSI, sp. n. (Plates VIII. & IX. figs. 8-12.)

General appearance very much as in the North-American *Neotoma cinerea*, strikingly different, by paler colour, whiter belly, and longer, more bushy tail, from either of the species of *Octodon*. Fur soft and fine, hairs of back about 22 mm. in length.

General colour above pale drab-grey, grizzled with black. Sides clearer drab. Under surface snowy white, well defined laterally, where it extends rather high up; the bases of the hairs slaty except on the chin. Front of upper lip hairy, not grooved. Face coloured like the back, paler on the sides of the muzzle and cheeks; no definite markings round eyes. A few longer vibrissæ placed just above eye, and a more prominent tuft of them between eye and ear. Ears large, shaped about as in *Octodon*, finely covered with short greyish hairs; a distinct tuft of white hairs at their anterior bases. Outer sides of arms and legs like back, inner sides like belly; upper surface of hands and feet pure white, the hairs stiff and elongated terminally, so as to surpass the claws; palms and soles entirely naked, strongly granulated, with projecting cushions, on which the pads are so small as to be scarcely perceptible among the granulations; under the heel the surface is comparatively smooth; pollex with a broad flat nail; hallux short, with a claw, its tip falling some way short of the base of the second digit; fifth toe, without claw, reaching to the end of the basal phalanx of the fourth. Scrotum naked. Penis with a bone, which is flattened, tapering, though not to a point, about 15 mm. in length. Tail nearly as long as the head and body, thick, cylindrical, well clothed throughout with hairs, which increase in length to the end, where they may be fully an inch long. In colour the tail is brownish black above and at the end, white proximally on the sides and below; the hairs of the pencil-end are usually pale brown or even sandy brown, but this appears to be an effect of bleaching, more or less dependent on the season, as is the case in the British Squirrel.

Skull and teeth as shown in the figures.

Dimensions of the type, measured by Mr. Simons in the flesh:—

Head and body 184 mm.; tail 152; hind foot, s. u. 36, c. u. 38; ear 32.

Skull—greatest length 46, basilar length 38, greatest breadth 24; nasals 17×5.8 ; interorbital breadth 10; length of frontal suture 13.5; breadth of brain-case 18.5; palate length 17.2; diastema 12; palatal foramina 4.8×2.4 ; length of upper tooth-series (crowns) 8.3; length of bulla 13; breadth of basi-occipital on suture 2.6.

Hab. Mountainous region south and south-east of the Titicaca-Poopo basin. Potosi, 4400 metres (type); Oruro, 3700 m.; Livichuco, 4500 m.; Challapata, 3800 m.

Type. Adult female. B. M. No. 2.2.2.2. Original number 1620. Collected October 1st, 1901, by Mr. P. O. Simons. 15 specimens examined.

Native names "Chockchuri" and "Achaco." "Found among rocks and cactus, in caves and old Indian tombs; nocturnal" (*Simons*).

I have had great pleasure in connecting with this very beautiful animal the name of Mr. Simons, in recognition of the remarkable collecting work he has done in the Andean chain during the last three years. His collections already number over 1600 mammals, more than 3000 birds, many hundreds of reptiles and amphibians, and large numbers of insects and other invertebrates.

ANDINOMYS, gen. nov. (*Cricetine*.)

Form murine. Thumb with a broad nail. Tail well-haired, but not pencilled.

Skull rat-like. Muzzle long, broad, and heavy. Interorbital region narrow, parallel-sided, without ridges. Palatal foramina large, with very sharply defined edges. Bullæ small.

Incisors heavy, smooth anteriorly. Molars very large, highly hypsodont, as in *Chinchillula*, but their pattern more as in *Phyllotis*, though with almost a microtine appearance in youth, when they are much more complicated than would be at all easily perceived from their structure in adult life (see figures).

This genus, like *Chinchillula*¹, is a highly hypsodont and heavily toothed relative of *Phyllotis*, itself more hypsodont than the brachyodont *Eligmodontia*. But in *Chinchillula* the teeth are remarkably simple, practically alike in youth and age, with opposite and connected enamel-spaces, as shown in the figures (Plate IX. figs. 5, 7). In *Andinomys*, on the other hand, the spaces are more or less alternated, the pattern, especially of m_1 , becomes less complicated with age owing to the wearing-out of accessory columns, and the spaces are or gradually become isolated from each other; the lateral angles are much more acute in youth, becoming comparatively blunt in old age.

ANDINOMYS EDAX, sp. n. (Plate IX. figs. 1-4, 6.)

General appearance of a large *Phyllotis* or soft-haired *Oryzomys*. Fur long, fine and soft, but not woolly; hairs of back about 19-20 mm. in length. General colour above dull buffy or fulvous buffy, lined with black; sides clearer, sandy buffy; under surface not sharply defined, buffy white, the hairs slaty basally. Head like body; no orbital markings. Ears fairly large, closely haired, brown

¹ *Chinchillula* was originally founded (Ann. Mag. N. H. (7) i. p. 280, 1898) on a single immature skin, but the British Museum now possesses a series of adult examples collected by Mr. Simons at Caylloma, Peru.

outside and in, their edges whitish. Upper surface of hands and feet well-haired, the hair of the ends of the digits surpassing the claws, silvery white; fifth hind toe, without claw, reaching to the middle of the second phalanx of the fourth; palms and soles naked, the pads large, rounded and prominent.

Skull with large nasals, very broad anteriorly. Interorbital region narrow, parallel-sided, concave in the middle line, the concavity bordered by low rounded and inconspicuous ridges, which do not overhang the orbit or run back on to the parietals. Interparietal large and broad. Anterior plate of zygoma-root concave anteriorly, with an overhanging point above. Palatal foramina very long and open, broadest mesially, running to a sharp point behind, where they reach to the level of the first lamina of m^1 , their edges very sharp and clearly defined. Posterior nares level with the back of m^3 , comparatively broad. Bullae small.

Dimensions of the type, measured in the flesh by Mr. Simons:—

Head and body 160 mm.; tail 145; hind foot, s. u. 29, c. u. 30; ear 25.

Skull—greatest length 37; basilar length 31; nasals 15.2×6.1 ; interorbital breadth (on the convex surface low down) 4, between the rudimentary ridges 2.1; breadth of brain-case 14; interparietal 4.3×10 ; zygoma-root 3; palate length 18; diastema 10.1; palatal foramina 9.6×3.2 ; length of upper molar series 7; combined breadth of upper incisors 3.

Hab. El Cabrado, between Potosi and Sucre, Bolivia. Altitude 3700 metres.

Type. Old female. B. M. No. 2.2.2.15. Original number 1568. Collected September 20th, 1901, by P. O. Simons. Two specimens.

A young specimen, apparently of the same species, had been previously obtained by Mr. Simons at La Paz, altitude 4000 m.

Mr. Simons says of this animal: "Caught in thicket of oak-like bushes; nocturnal."

Owing to its extreme general resemblance to *Phyllotis*, the young specimen from La Paz had been supposed to be an example of that genus with a wrongly numbered skull, but the later examples prove that Mr. Simons was in this instance, as usual, entirely correct in his labelling.

EXPLANATION OF THE PLATES.

PLATE VIII.

Neotodon simonsi, p. 115.

PLATE IX.

Figs. 1, 2, 3. *Andinomys edax* (p. 116), skull.

Fig. 4. *Andinomys edax*, right upper tooth-row: *a*, adult; *b*, young.

5. *Chinchillula sahamae* (p. 116), right upper tooth-row: *a* & *b* as before.

6. *Andinomys*, right lower tooth-row: *a* & *b* as before.

7. *Chinchillula*, right lower tooth-row: *a* & *b* as before.

Figs. 8, 9, 10. *Neotodon simonsi* (p. 115), skull.

Figs. 11, 12. *Neotodon*, right upper and right lower tooth-rows.